



X



WILD WEST

INSURANCE AGREEMENT

GROUP 1

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OUTLINE

- Data Preparation
- Filtering the Eligible Policies
- Data Cleaning
- Calculate the Commissions
- Calculating Clawbacks
- Monthly Reports
- Additional Analysis
- Code



WHAT WE USED



DBeaver

PostgreSQL



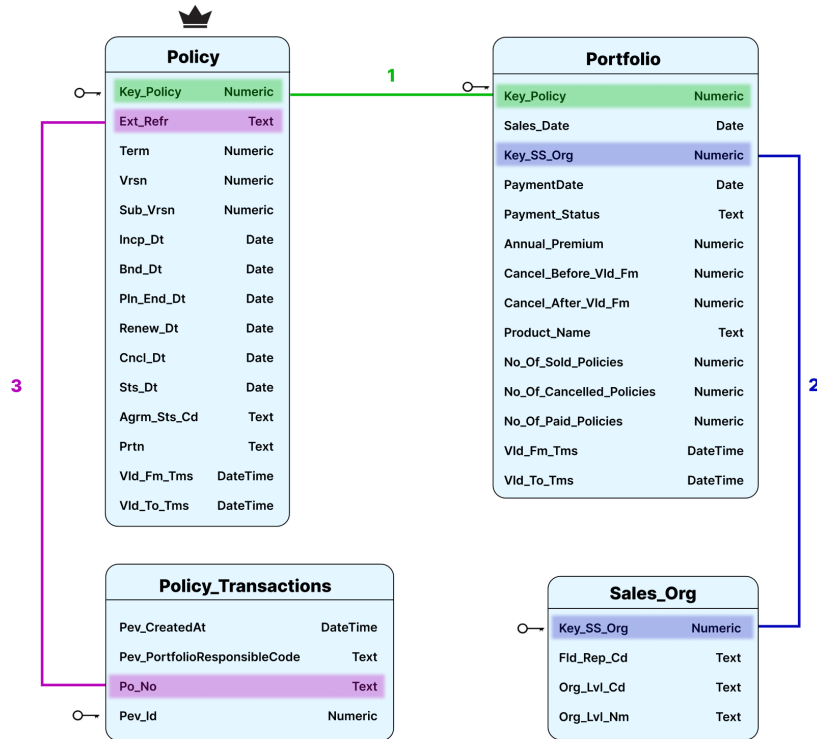
Azure Data Studio

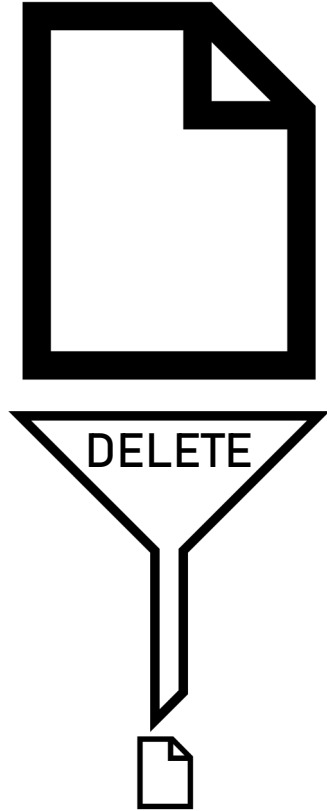
Transact-SQL



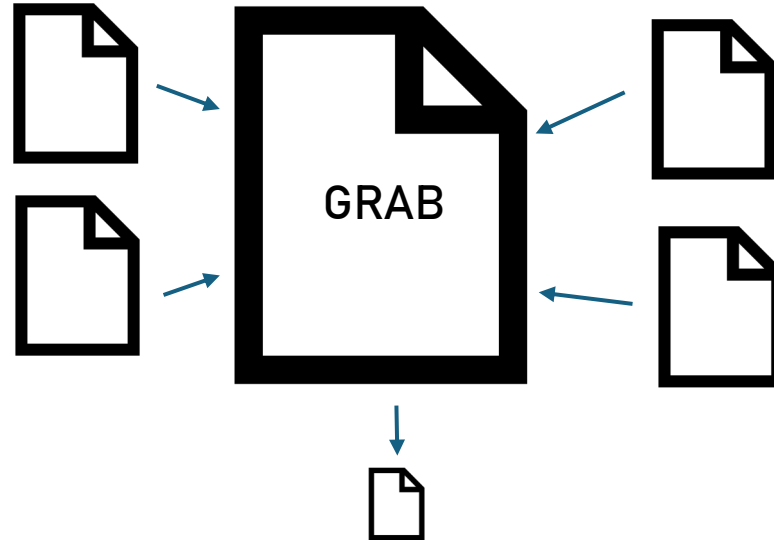
SSMS

DATABASE SCHEMA





JOINING THE DATA SETS



FILTER ELIGIBLE POLICIES



CRITERIA 1

Portfolio Code should be WILDWEST-2 or WILDWEST-3

ext_refr = Policy Number

```
DELETE FROM ntrim
WHERE ext_refr IN
  (SELECT ext_refr
   FROM ntrim
   WHERE pev_portfolioresponsiblecode
   NOT IN ('WILDWEST-2','WILDWEST-3')
   OR pev_portfolioresponsiblecode IS NULL);
```

```
SELECT po_No
FROM Policy_Transactions
WHERE Pev_PortfolioResponsibleCode IN
('WILDWEST-2', 'WILDWEST-3');
```



CRITERIA 2

Policy has been marked with the portfolio code for its entire duration

```
WITH a AS
    (SELECT ext_refr ,
        COUNT(DISTINCT pev_portfolioresponsiblecode)
    FROM nall
    GROUP BY ext_refr
    HAVING COUNT (DISTINCT
        pev_portfolioresponsiblecode) >= 2)
DELETE FROM ntrim
WHERE ext_refr IN (SELECT ext_refr FROM a);
```

```
WITH Lags AS
    (SELECT *,
        LAG(pev_portfolioresponsiblecode, 1)
    OVER (PARTITION BY po_no ORDER BY
        key_policy, pev_id) AS lag
    FROM dbo.PolicyandTransactions)
SELECT *
FROM Lags
WHERE lag <> pev_portfolioresponsiblecode
```



CRITERIA 3

The policy's payment status should indicate that the premium is paid

```
DELETE FROM ntrim  
WHERE ext_refr IN  
    (SELECT ext_refr  
     FROM ntrim  
     WHERE payment_status = 'Not Paid');
```

```
SELECT key_policy  
FROM dbo.portfolio  
WHERE payment_status = 'Paid'
```



CRITERIA 4

Eligibility: (Product 1 to Product 8) & (Product 13 to Product 31)

```
DELETE FROM ntrim
WHERE ext_refr IN
    (SELECT ext_refr
    FROM ntrim
    WHERE CAST(SUBSTRING(product_name, 8) AS
INT) IN (9,10,11,12));
```

```
SELECT *
FROM dbo.portfolio
WHERE product_Name NOT IN
('Product 9', 'Product 10', 'Product 11',
'Product 12')
```



CRITERIA 5

Sales Channel: a. Outbound sales: portfolio code = 'WILDWEST-3'
b. Internet Sales: portfolio code = 'WILDWEST-3'
c. Inbound Sales: portfolio Code = 'WILDWEST-2'

```
DELETE FROM ntrim
WHERE ext_refr IN (SELECT ext_refr
FROM ntrim
WHERE NOT (org_lvl_nm IN ('Outbound','Internet') AND
pev_portfolioresponsiblecode = 'WILDWEST-3')
AND NOT(org_lvl_nm = 'Inbound' AND
pev_portfolioresponsiblecode ='WILDWEST-2' ));
```

```
SELECT *
FROM dbo.Sales_Org
WHERE ((Org_Lvl_Nm IN
('Internet','Outbound') AND
PT.Pev_PortfolioResponsibleCode =
'WILDWEST-3')
OR (Org_Lvl_Nm = 'Inbound' AND
PT.Pev_PortfolioResponsibleCode =
'WILDWEST-2'))
```



ERRORS FOUND + ASSUMPTIONS MADE

1. Data cleaning to remove null values and fix errors
2. Update the table

```
UPDATE ntrim SET annual_premium = LEFT  
(annual_premium, POSITION (',' IN annual_premium) - 1);  
ALTER TABLE pro.nttrim ALTER COLUMN annual_premium TYPE  
INT4 USING annual_premium::INT4;
```

3. Policies with multiple versions. Consider the ones with available data
4. Instances with multiple annual premiums NOT an error in data
5. We pay commission for the whole year the month following the payment of the policy



CALCULATE COMMISSIONS

```
CREATE TABLE temp_ntrim AS  
( THE STATEMENT)  
DROP TABLE ntrim;  
SELECT * INTO ntrim FROM temp_ntrim;  
DROP TABLE temp_ntrim;
```

OR

```
CREATE TABLE temp_ntrim AS  
( THE STATEMENT)  
DROP TABLE ntrim;  
ALTER TABLE temp_ntrim  
RENAME TO ntrim ;
```



COMMISSION STRUCTURE

First 1500 eligible policies: 12% of the Annual_Premium
1501st policy onwards: 14% of the Annual_Premium

```
SELECT  
    MAX(pln_end_dt) OVER(PARTITION BY ext_refr) - incp_dt AS days_valid,  
    *  
FROM ntrim;
```

Days valid = days the policy **should** be active and paid per the agreement



COMMISSION STRUCTURE

```
WITH a AS
  (SELECT ext_refr AS ext_ref, row_number() OVER(ORDER BY MIN(paymentdate),
  MIN(sales_date))
  FROM ntrim
  GROUP BY ext_ref)
SELECT *
FROM ntrim AS n
  LEFT JOIN a
  ON n.ext_refr = a.ext_ref;
```



COMMISSION STRUCTURE

SELECT CASE

WHEN row_number >= 1501

THEN annual_premium * 0.14 * (days_valid - extract (DAY FROM date_trunc ('day', vld_fm_tm - incp_dt))) / days_valid

ELSE annual_premium * 0.12 * (days_valid - extract (DAY FROM date_trunc ('day', vld_fm_tm - incp_dt))) / days_valid END AS revenue,

*

FROM ntrim;



CALCULATE CLAWBACK



CLAWBACK

SELECT CASE

WHEN agrm_sts_cd = 'ACTIVE'

THEN date_trunc('day', vld_to_tm - vld_fm_tm)

ELSE date_trunc('day', MAX(pln_end_dt) OVER(PARTITION BY
ext_refr) - vld_fm_tm) END AS time,

*

FROM ntrim;



CLAWBACK

SELECT CASE

WHEN DATE (vld_to_tm) <> rnew_dt THEN revenue -

EXTRACT (DAY FROM TIME) / days_valid * revenue

WHEN cncl_dt IS NOT NULL THEN EXTRACT (DAY FROM TIME) /
days_valid * revenue

ELSE NULL END AS claw,

*

FROM ntrim;



CLAWBACK

```
ALTER TABLE ntrim  
ADD COLUMN claw_month date;  
UPDATE ntrim SET claw_month = CASE  
    WHEN claw > 0 AND agrm_sts_cd = 'ACTIVE'  
    THEN DATE_TRUNC ('Month', vld_to_tm)  
    WHEN agrm_sts_cd = 'CANCEL'  
    THEN DATE_TRUNC ('Month', cncl_dt)  
    ELSE NULL END;
```



REPORTING



MONTHLY AGGREGATION

Group the data by month and sum the commissions for each month

```
SELECT pay_month,  
       COUNT (*),  
       ROUND (SUM(revenue) , 2)  
FROM ntrim  
GROUP BY pay_month  
ORDER BY 1;
```

	🕒 pay_month ▼	123 count ▼	123 round ▼
1	2024-01-01	36	17,888.99
2	2024-02-01	277	158,366.33
3	2024-03-01	373	245,762.76
4	2024-04-01	593	304,223.76
5	2024-05-01	801	419,289.79
6	2024-06-01	833	451,924.48
7	2024-07-01	843	455,414.08
8	2024-08-01	795	455,145.88

MONTHLY AGGREGATION

Group the data by month and sum the clawback for each month

```
SELECT claw_month,  
       COUNT (*),  
       ROUND (SUM (claw) , 2)  
FROM ntrim  
GROUP BY claw_month  
ORDER BY 1;
```

	🕒 claw_month ▼	123 count ▼	123 round ▼
1	2024-01-01	19	11,188.62
2	2024-02-01	58	43,322.54
3	2024-03-01	70	36,382.41
4	2024-04-01	115	59,976.66
5	2024-05-01	148	82,045.88
6	2024-06-01	164	93,872.96
7	2024-07-01	203	103,829.92
8	2024-08-01	145	74,254.09



ADDITIONAL ANALYSIS



GENERAL CODE BY AGENT

Note: strim is a table like ntrim but
Ignores if it's paid to get all sales

WITH A AS

```
(SELECT fld_rep_cd AS fld_a,  
      COUNT (*) AS salec_month,  
      ROUND (AVG (revenue),2) AS saleavg_month,  
      ROUND (SUM (revenue),2) AS salesum_month  
FROM strim  
WHERE sale_month = '2024-02-01' -- CHANGE THIS TO CURRENT MONTH  
GROUP BY fld_rep_cd)
```

,B AS

```
(SELECT fld_rep_cd AS fld_b,  
      COUNT (*) AS paidc_year,  
      ROUND (AVG (revenue),2) AS paidavg_year,  
      ROUND (SUM (revenue),2) AS paidsum_year  
FROM ntrim  
WHERE pay_month <= '2024-02-01' -- CHANGE THIS TO CURRENT MONTH  
GROUP BY fld_rep_cd)
```



GENERAL CODE BY AGENT

```
,C AS
  (SELECT fld_rep_cd AS fld_c,
    COUNT (*) AS salec_year,
    ROUND (SUM (revenue) , 2) AS salesum_year,
    ROUND (AVG (EXTRACT (MONTH FROM sale_month)) , 2) AS avgsalemonth
  FROM strim
  WHERE sale_month <= '2024-02-01' -- CHANGE THIS TO CURRENT MONTH
  GROUP BY fld_rep_cd)

,D AS
  (SELECT fld_rep_cd AS fld_D,
    COUNT (*) AS clawc_year,
    ROUND (SUM (claw) , 2) AS clawsum_year
  FROM strim
  WHERE claw_month <= '2024-02-01' -- CHANGE THIS TO CURRENT MONTH
  GROUP BY fld_rep_cd)
```



GENERAL CODE BY AGENT

```

SELECT fld_a,
       salec_month,
       salesum_month,
       salec_year,
       avgsalemonth,
       paidc_year,
       ROUND ((paidc_year*100.0) / (salec_year),2) AS percent_paid,
       ROUND ((clawc_year*100.0) / (salec_year),2) AS percent_cancel,
       clawc_year,
       salesum_year,
       paidsum_year,
       clawsum_year
FROM a
LEFT JOIN b
ON a.fld_a = b.fld_b
LEFT JOIN c
ON a.fld_a = c.fld_c
LEFT JOIN d
ON a.fld_a = d.fld_d
ORDER BY 3 DESC;
  
```

	42 fld_a	123 salec_mon	123 salesum_month	123 salec_year	123 paidc_yea	123 avgsale_mor	123 percent_paid	123 percent_claw	123 clawc_year	123 salesum_year	123 paidsum_year	123 clawsum_y
1	BERLOH-5	2	707.56	2	[NULL]	8	0	0	[NULL]	707.56	[NULL]	
2	NADRAK-1	5	2,252.6	36	29	4.36	80.56	5.56	2	18,650.84	15,189.06	
3	TSOBOR-5	1	198.24	2	1	7	50	0	[NULL]	631.12	432.88	
4	67329VD-6	2	1,249.64	5	1	6.2	20	0	[NULL]	1,812.86	241.78	
5	NNABOM-5	4	4,329.08	44	37	4.23	84.09	2.27	1	23,601.16	17,845.34	
6	BIAJD-5	1	1,564.08	4	3	7.25	75	0	[NULL]	3,685.08	2,121	
7	TNMIB-5	2	793.24	13	11	3.69	84.62	0	[NULL]	10,547.96	9,272.14	
8	BSIRAH-6	8	3,228.26	25	10	7.32	40	0	[NULL]	14,543.9	6,076.14	
9	CAMRAK-0	9	5,873.28	57	44	4.75	77.19	3.51	2	29,595.58	22,358.7	
10	CINKAJ-6	1	381.08	12	11	5.92	91.67	0	[NULL]	9,360	8,978.92	
11	IRELKE-8	2	1,965.46	20	15	5.35	75	5	1	11,241.06	8,046.12	
12	IRELAS-8	3	1,251.88	42	27	4.81	64.29	11.9	5	30,682.24	21,508.46	
13	VOAIB-1	1	1,042.3	3	2	7	66.67	0	[NULL]	2,833.6	1,791.3	
14	AOMHOJ-3	11	3,471.3	23	9	6.35	39.13	0	[NULL]	10,030.02	4,600.68	
15	AIMSUG-7	5	3,511.9	32	23	4.81	71.88	9.38	3	20,486.2	14,107.8	
16	BBEKNA-6	2	403.34	9	6	6.89	66.67	0	[NULL]	3,450.58	1,959.44	



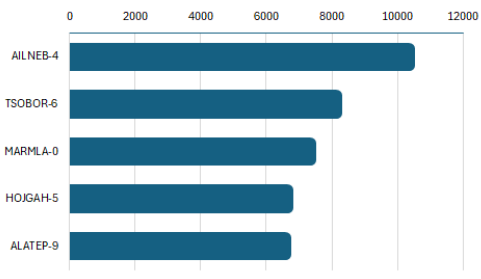
TOP SALES BY AGENT

```
WITH a AS
  (SELECT fld_rep_cd AS fld_a,
    ROUND(SUM(revenue),2) AS salesum_month
  FROM strim
  WHERE sale_month = '2024-08-01' -- CHANGE THIS TO CURRENT MONTH
  GROUP BY fld_rep_cd)
SELECT fld_a,
  salesum_month
FROM a
ORDER BY 2 DESC
LIMIT 5;
```

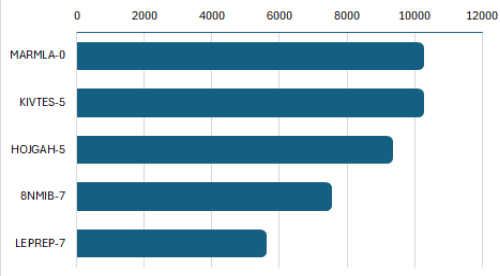


TOP SALES IN JAN-APR

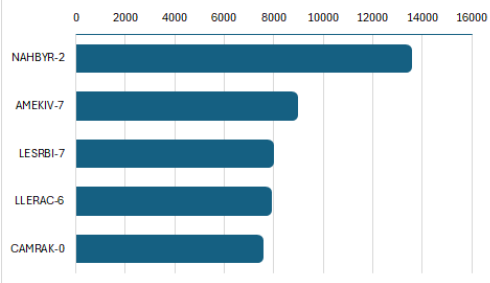
January Commissions



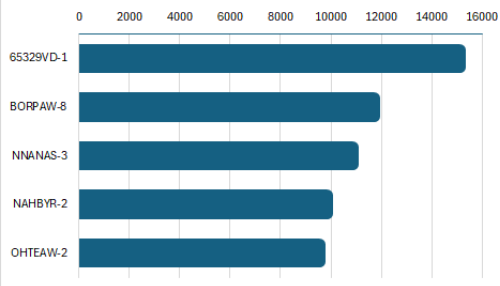
February Commissions



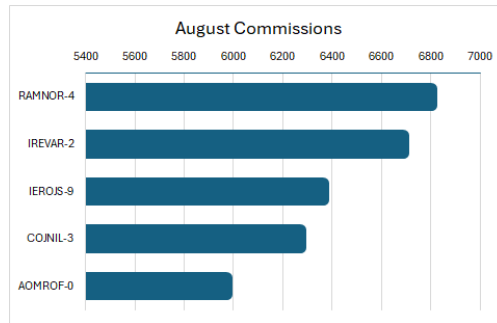
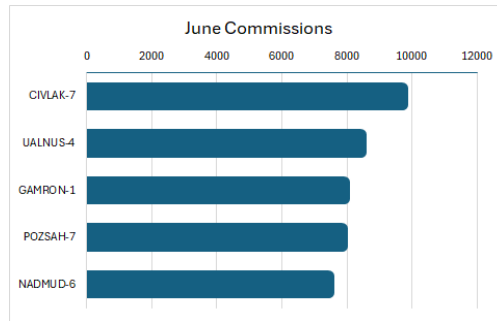
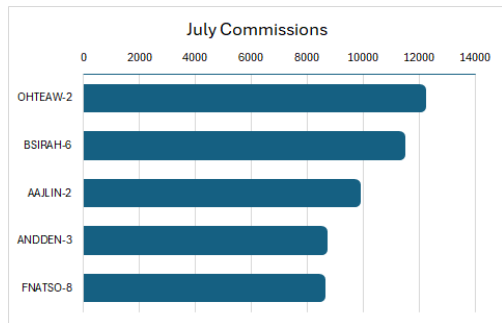
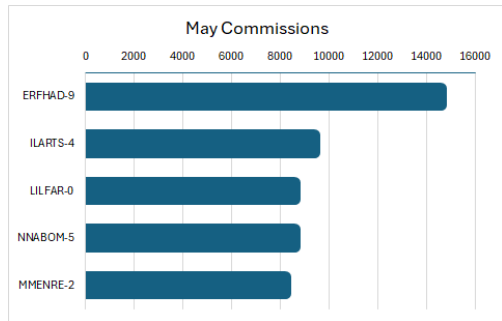
March Commissions



April Commissions



TOP SALES IN MAY-AUG



TOTAL CANCELATIONS

```
WITH a AS
  (SELECT COUNT(*) AS clawc_year
   FROM strim
   WHERE claw_month <='2024-08-01'
   AND agrm_sts_cd='CANCEL')
,b AS
  (SELECT COUNT(DISTINCT (ext_refr)) AS salec_year
   FROM strim
   WHERE sale_month <='2024-08-01')
SELECT (SELECT clawc_year FROM a),
       salec_year,
       ROUND((SELECT clawc_year*100.0 FROM a)/salec_year,2)
FROM b
```

	123 clawc_year	123 salec_year	123 percent_claw
1	258	6,098	4.23



CANCELLATIONS BY AGENT

WITH a AS

```
(SELECT fld_rep_cd AS fld_a,  
      COUNT(*) AS salec_year,  
      ROUND(SUM(revenue),2) AS salesum_year,  
FROM strim  
WHERE sale_month <='2024-08-01'-- CHANGE THIS TO CURRENT MONTH  
GROUP BY fld_rep_cd)
```

,b AS

```
(SELECT fld_rep_cd AS fld_b,  
      COUNT(*) AS clawc_year,  
      ROUND(SUM(claw),2) AS clawsum_year  
FROM strim  
WHERE claw_month <='2024-08-01'  
      AND agrm_sts_cd='CANCEL'-- CHANGE THIS TO CURRENT MONTH  
GROUP BY fld_rep_cd)
```



CANCELLATIONS BY AGENT

```
SELECT fld_a,  
       salec_year,  
       clawc_year,  
       COALESCE(ROUND((clawc_year*100.0)/  
                     (salec_year),2),0) AS percent_CLAW  
FROM a  
LEFT JOIN b  
ON a.fld_a = b.fld_b  
WHERE COALESCE (ROUND((clawc_year*100.0)/  
                    (salec_year),2),0) > 5  
      AND clawc_year > 1  
ORDER BY 4 DESC;
```

	A:2 fld_a	123 salec_year	123 clawc_year	123 percent_claw
1	OECIB-3	5	3	60
2	59229VD-7	4	2	50
3	NILDNA-3	8	2	25
4	ASISLO-0	16	3	18.75
5	BAFLAK-8	22	4	18.18
6	BDJIB-6	12	2	16.67
7	DAWHAD-7	12	2	16.67
8	AAHGAM-4	21	3	14.29
9	OHTEAW-2	78	10	12.82
10	LOTANO-8	47	6	12.77
11	IRELAS-8	42	5	11.9
12	TAMLUZ-8	19	2	10.53
13	USSIB-7	29	3	10.34
14	ROJHOJ-8	30	3	10
15	HOJNEM-5	20	2	10
16	ERFHAD-9	30	3	10
17	POZSAH-7	50	5	10
18	CIVLAK-7	52	5	9.62
19	NIMOJB-4	32	3	9.38
20	AIMSUG-7	32	3	9.38
21	TEPGAH-8	32	3	9.38
22	COJNIL-3	22	2	9.09
23	AILNEB-4	37	3	8.11
24	TANOHA-5	25	2	8
25	BDILOM-7	25	2	8



INCOMPLETE DATA

Incomplete information from WILD WEST in Portfolio Table

Policy table

A-Z ext_refr	123 key_polic	123 vrsn ↑	A-Z agrm_sts_cd	🕒 vld_fm_tm	🕒 vld_to_tm
PO0054086430	260,826,440	1	ACTIVE	2024-01-02 00:00:00.000	2024-02-06 10:43:52.000
PO0054086430	262,097,621	2	ACTIVE	2024-02-06 10:43:52.000	2024-03-25 09:08:51.000
PO0054086430	263,911,144	3	ACTIVE	2024-03-25 09:08:51.000	2024-05-31 00:00:00.000
PO0054086430	266,716,322	4	CANCEL	2024-05-31 00:00:00.000	9999-12-31 23:59:59.000

Portfolio table

23 key_policy	123 annual_premium	A-Z product_name	🕒 sales_date	🕒 paymentdate
260,826,440	3,449	Product 22	2024-01-02	2024-02-01
[NULL]	[NULL]	[NULL]	[NULL]	[NULL]
[NULL]	[NULL]	[NULL]	[NULL]	[NULL]
[NULL]	[NULL]	[NULL]	[NULL]	[NULL]



THANK YOU!

READY FOR SOME ACTION NOW?

A few stats

Total just ntrim

Words: 750

Lines of code: 159

Amount of instruction: 59

Total

Words: 1596

Lines of code: 406

Amount of instruction: 102

QR-Code to Code



https://docs.google.com/document/d/1EuJUrT62Aa-aqjN3wAUetQgx2_L597lA68oW8wTw6kw

